

**IN THE CLAIMS**

Claims 1. – 151. (Cancelled)

152. (New) An array of biolayers comprising one or more bioactive molecules, the array provided by microdispensing a controlled volume of liquid, including one or more bioactive molecules selected from DNA, RNA, or a mixture thereof, onto a substantially planar surface to form an array of biolayers where each biolayer has a defined perimeter separate from each other biolayer in the array.

153. (New) The array of claim 152 in which the microdispensing step comprises positioning over the substantially planar surface a needle tip on which tip a drop of liquid is or is then partially formed, contacting the planar surface with the partially formed drop, and retracting the needle tip such that a controlled volume of liquid less than that of the partially formed drop remains on the substantially planar surface.

154. (New) The array of claim 152 in which the array of biolayers is arranged in a horizontal direction.

155. (New) The array of claim 152 in which the array of biolayers is arranged in a horizontal direction and a lateral direction.

156. (New) The array of claim 152 in which the one or more bioactive molecules include polypeptides, proteins, glycoproteins, or mixtures thereof.

157. (New) The array of claim 152 in which the substantially planar surface is that of a biosensing device.

158. (New) The array of claim 152 in which the substantially planar surface is that of a wafer.

159. (New) The array of claim 152 in which the free energy of the surface onto which the liquid is dispensed has been tailored by a pretreatment.

160. (New) The array of claim 159 in which the surface onto which the liquid is dispensed has been pretreated with a plasma.
161. (New) The array of claim 160 in which the plasma comprises tetrafluoromethane, trifluoromethane, oxygen, hydrogen, water, argon or nitrogen.
162. (New) The array of claim 152 in which said microdispensing includes positioning over a surface a needle tip on which tip a drop of liquid is or is then partially formed, contacting the surface with the partially formed drop, and retracting the needle tip such that a controlled volume of liquid less than that of the partially formed drop remains on the surface.
163. (New) The array of claim 162 in which the volume of liquid reproducibly dispensed is about one-one thousandth of the drop size or greater.
164. (New) An array of biolayers comprising one or more bioactive molecules, the array provided by microdispensing a controlled volume of liquid, including one or more bioactive molecules selected from single-stranded polynucleotides, onto a substantially planar surface to form an array of biolayers where each biolayer has a defined perimeter separate from each other biolayer in the array.
165. (New) The array of claim 164 in which the microdispensing step comprises positioning over the substantially planar surface a needle tip on which tip a drop of liquid is or is then partially formed, contacting the planar surface with the partially formed drop, and retracting the needle tip such that a controlled volume of liquid less than that of the partially formed drop remains on the substantially planar surface.
166. (New) The array of claim 164 in which the array of biolayers is arranged in a horizontal direction.

167. (New) The array of claim 164 in which the array of biolayers is arranged in a horizontal direction and a lateral direction.
168. (New) The array of claim 164 in which the one or more bioactive molecules include polypeptides, proteins, glycoproteins, or mixtures thereof.
169. (New) The array of claim 164 in which the substantially planar surface is that of a biosensing device.
170. (New) The array of claim 164 in which the substantially planar surface is that of a wafer.
171. (New) The array of claim 164 in which the free energy of the surface onto which the liquid is dispensed has been tailored by a pretreatment.
172. (New) The array of claim 171 in which the surface onto which the liquid is dispensed has been pretreated with a plasma.
173. (New) The array of claim 172 in which the plasma comprises tetrafluoromethane, trifluoromethane, oxygen, hydrogen, water, argon or nitrogen.
174. (New) The array of claim 164 in which said microdispensing includes positioning over a surface a needle tip on which tip a drop of liquid is or is then partially formed, contacting the surface with the partially formed drop, and retracting the needle tip such that a controlled volume of liquid less than that of the partially formed drop remains on the surface.
175. (New) The array of claim 174 in which the volume of liquid reproducibly dispensed is about one-one thousandth of the drop size or greater.